SUC-SESSION

YOUR SPECTRUM - MAGAZIN

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Time to run hot on the Spectrum!

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Publisher

The Spectrum-User-Club, formally known as the Spectrum-User-Club Wuppertal, is the oldest existing Spectrum-Club in Germany, the ASC is the only Spectrum-Club in Austria. Since 1998 the Club-Magazine SUC-SESSION and SCENE+ have been sent together to all club members. They are compiled from contributions produced by the editor(s) as well as the readers. We call on all readers to send in their contributions as text files on cassette, +D, Opus, MB02 or MS-DOS (Word or pure Text files) or handwritten, per e-mail or printed on paper to us.

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How can you become a Member

Membership is basically free but the main services, the clubs magazine SUC-SESSION and SCENE+ can be subscribed to individually or together.

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5) SCENE+ as a TAP-Download	1,50 Euro	8,00 Euro
6) Combi-packet SUC-Session & SCENE+ Disk	5,00 Euro	26,00 Euro
7) Combi-packet SUC-Session & SCENE + Tape	5,50 Euro	28,00 Euro

Our magazines can be mixed in any combination you want it is only important to tell us exactly what you want. Orders for our Download-Service should be sent by E-mail to:sintech@online.de.Your can pay by Cheque(Euro), Paypal or Bank-transfer.Account Nr.3205069, Sort-code 380 707 24. As reason for the payment please include the information : Packetnumber(s), for example Nr. 6 or 2 and 5 or whatever you want to order.

New members who are ordering the Diskette version of SCENE+ should state the required format, we have available MB02+, Opus, +D und now also D80/Didaktik. If you are ordering additional Disk's or Cassettes together with a Combi-Packet then the price for these must be added to the Subscription number. Any questions should simply contact us per E-mail or under: 0049-711-775033.

Editorial

Only hours now to the deadline. The magazine (German edition) just has to be ready for the Spectrumania. Oh well, it's tomorrow so if this issue is to be ready on time then I need to get it to the printers today. But then again I've got an appointment in two hours…oh my, oh my.

Still this is not a reason to skimp on the editorial. It seems that a number of readers took my comments in the last issue to heart! The work load produces a magazine like this one is extreme and it really does help when some readers send me complete finished articles. As the time between issues is a little shorter than usual this time (especially for the English readers) that was a good reason for a lot of people not to write anything. So once again most of what is in the magazine is from me. I have heard that a number of people are working on articles and I can only say keep up the good work.

This issue should appear around the middle of November *(Tricky for the English readers because Thomas didn't send the articles for translation until the 20th….did I ever tell you how us poor old translators suffer... I've got this pain in all the diodes down my left side….Ian)* and that still leaves me some weeks in the old year to produce issue 6. I'm more or less back into the correct rhythm. So that it stays that way I need your help. I'm still looking for someone who can help me by researching various subjects which look like they could be interesting and where I just don't have the time to find out the details. Anyone who would like to help and doesn't know on what subject he could write should simply contact me. Additionally I'm also still looking for someone prepared to produce the Opus version of SCENE+. There is the enticement of a free subscription to SCENE+ and so with a little work you could also save money.

The central theme for the autumn is of course the user meetings in Wittenberg, Ittenbach and Stuttgart and in between those a meeting in Holland and the Zlincon in the Czech Republic. Not forgetting Norsam in England. Anyone who visits any of these meetings is of course asked if possible to provide a short report for us, rather as Factor6 has done about the Zlincon. Just a short piece which we can print in the 'News in brief' section. Longer articles would of course get there own title.

I'm really pleased that user meetings still exist, that there are still users and that there is even new software appearing which we can publicise in this magazine. So in reality everything is there which the Spectrum-user could wish for, including modern memory media which appear more and more often. Now we are entering the cold part of the year but don't let your Speccy get cold.

So with that lot's of fun with this issue.

Thomas

Readers Letters

As usual the readers letters section remains one of the most important. We are really pleased to receive every E-Mail, Letter, Telephone call or entry in the SUC-Forum under www.netreal.de/cgi-bin/forenserver/foren/F_554/cutecast.pl

We begin with an E-Mail from Christof Odenthal:
I took a number of pictures at the Xzentrix Party. It ran from Friday to Sunday and there were perhaps 20 people there. As for computers there were among others, VC20, C64, C116/Plus 4, CPC, CPC+, my Speccy 128, various Apples (II and Macintosh), an Atari XE, a Vectrex and a number of Dreamcasts (with dance mats). It was a lot of fun. By the way wouldn't it be a good idea to open the Spectrum meeting in Stuttgart for all computers? Perhaps we would get more visitors and the view outside of our little world can be a lot of fun. At the Xzentrix I also looked at C64 and CPC demo's. There doesn't seem to be anything left of the war between the C64 and the CPC. Well not much, a friend of mine from the CPC scene has written a song 'Mama don't buy me a Commodore!'.
At the Xzentrix I got to know Hans Franke for the first time, he is the organiser of the 'Vintage Computer Festival' in Munich. In May they had 300 visitors! He has rented a storage room for his 1500 old computers. He wants to develop a Flash-ROM box for the CPC into which you could install often used applications and which would be immediately available at switch on. He asked whether would could use something like this for the Speccy. How's it going with the MB02 or have the 8bit fans stopped the production now?
Greetings, Christof

Hi Christof,
The meeting in Stuttgart is planned for a relatively small number of people. If 20 people turned up the room would be jamb packed. So for this reason we don't need to open it for other computers.
On the other hand I did ask last year if there was any interest in an 8 bit party. Then I could have hired a larger hall this year instead of organising the Spectrum meet. But there wasn't much reaction and absolutely nothing from the CPC users. I did write to all of the known User groups and magazines. I asked for the support of the clubs. Only the usual ones answered, Wolfgang, the Joyce-Club and ZX-Team and that was too few. So I cancelled it. I should perhaps mention that a number did mention that there was already the VCFE in Munich so why not organise more such events. Oh well, if I don't get any support from the clubs then I would rather leave it.
The MB02 production stopped quite a long time ago, whether there will be a follow up product is unclear. But it is planned to put the schematics for the MB02 on the net...something at least.

I have often wondered why Andrew McDonald regularly asked me for the Download Password for issues of the magazine as he subscribes to the printed version. Here is his answer:
I really like to have an electronic backup copy of everything I have if possible. Just in case anything happens to the original paper version. For example I scan copies of articles from scientific journals into my computer and then convert them to PDF. The advantage is that wherever I am I can see these articles on my notebook. Obviously you can't search

scanned articles for particular words but it's still useful having it readily to hand and a notebook is easier to carry around than 20 fully filled ring binders.
In the scientific world you see more and more people subscribing to both the printed and electronic copy of their journals. So I don't see anything very unusual in wanting the printed and the electronic download copy of SUC-Session.

Hello Andrew,
Of course you and any reader can download the PDF version of the magazine, That's no problem and doesn't cost extra. If there are more interested members then we could print the password on the second page of each issue, who would like us to do this?

Filipe has a received his magazine free as thanks for the article about keyboard membranes.

You have a nice magazine and I will subscribe to the PDF version, probably from next month. Can I put a small image of the printed article on my website ? Thanks!

Hi Filipe, the image on your website would certainly be some nice advertising for the club, perhaps you could combine it with a link to our User-Club pages.
I have an MB02 disk interface and there is software available to load Z80 or TAP and TZX files. But I'm not sure that this possibility exists for other diskette systems and the MB02 is not available anymore. Of course you could use an emulator to create a cassette version of a TAP file and load it that way into the Spectrum.
I have also heard of another solution. The IDE interface that we sell was originally developed for the MB02 and works with it's operating system. And there is another operating system called 'MATRIX'. Matrix can load Z80 and perhaps TAP files directly. The problem is that 'Matrix' has never been finalised. I have an early Beta version which can read but not write. With this you could use a PC to put the data on the Hard-disk and then swop the disk to the Spectrum and read it. A bit complicated but possible.

Christof has discovered a mistake:
Hi Thomas,
In the readers letters on page 15 there seems to be an (translation?) error which I have noticed. The first line should really be on page 14 above the first sentence and then a couple of lines in the text underneath are incorrect. Here is the correction:
Line 9: I=254 (Instead of I=256)
Line 11: 253*256+253 (instead of 256*256+253)
Line 12: LD A,#C3 (instead of LD A,#3)
Greetings, Christof

Hello Christof, yes, there was a mistake. In the English version of the magazine it is correct because Ian saw the error and corrected it. But it was too late for the German version. Still it's good when some readers are awake and spot the mistakes.

LCD feels we have treated him unfairly:
Hello Thomas,
In the club info you have stated that as the Marketing director I haven't done anything, that's not completely correct. Firstly in my program BMP2SCR.PRO I have included the text

'Sponsored by Sintech'. Secondly I informed a number of people in the forums that if they are looking for Retro-products then they should take a look at Sintech and thirdly I wanted to write to all of the Spectrum users we know about but I need your mail-address data bank and I'm still waiting for it. Have you forgotten ?

OK, OK, I admit that you do carry out some activities as the Marketing Director, I simply hadn't noticed any results as no-one has said to me that 'LCD told me to contact you'. But that doesn't matter as long as your active. The text in BMP2SCR is certainly a good idea. An address databank of all of the people who have contacted us is something we would have to construct. It could be a pretty big databank.

Benjamin Versteeg has a repair problem:
Hello Thomas,
I've made a mistake and managed to destroy all of the PAL IC's in my Disciple interface. Do you know where I could get new ones? I have the PAL IC's I just need someone who could program them for me. With Best Wishes, Benjamin Versteeg

Hello Benajamin, I'm sorry but I don't know of anyone who can burn Disciple PAL's. I only know a source for the +D. Unfortunately the Disciple PAL is different from that used in the +D. But perhaps one of our readers could help.

Kevin Bennet is dreaming of a Spectrum set-up with the MB03:
At the moment I'm thinking of a Diskette/Compact Flash system which I could use as digital storage for my cassettes. Better than BweeeeeeeeeEEeeeep BweeeeeEEeeeeeppp etc.
I would be really interested in such an interface and so I have the following questions:

- Will it be easy to transfer cassettes to the Hard-disk/Diskette system?
- Will it be possible to transfer diskettes to the Hard-Disk
- Will it be possible to copy PC emulator files like TAP files or to create them?
- How will the compatibility be between MS-DOS and the Spectrum? Will it be like the Plus D/Disciple and how fast could you load data into the Spectrum?
- Will the interface be put under the Spectrum or behind it, so like the Interface 1 or like the +D?

Can you send me detailed information about the MB02/03 interface and also send me the software. I would love to read it and then write something about it or buy it.
Something else I'm also interested in is controlling something between the 48K beeper and the AY. The standard output of the 48K beeper is very loud compared to the AY. Could this be an improvement for the MB03?
I'd like to know more so that I can place an order
Best wishes, Kevin Bennet

Hallo Kevin,
To start I must say that is questionable that the MB03 will ever be built. The MB02 may have been a good interface but world wide only about 50 were sold. In reality a very small number for an interface that everyone is talking about. In order to be able to finance the development of the MB03 it is necessary to have a confirmed number of customers and as this should be around 50 it appears to me to be almost impossible.

Many of the possibilities you mention are already built into the MB02 so you can very simply copy cassettes to diskettes, unpack TAP files and copy them between MS-DOS and BS-DOS and you can do it with amazing speed. There is also an IDE interface for the MB02 so that you can control a hard-disk and CD-ROM. This works by creating virtual diskettes on the hard-disk. You can have up to 252 of them each with up to 2MB. I have heard about an interface available from PC outlets which allow Compact Flash Cards to be controlled like Hard-disks. With this accessory you could use a Compact Flash Card instead of a Hard-disk. Then again thee are very small hard-disks (used in notebooks) which could also be used.
The MB03 should have the IDE port as standard as well as allowing the connection of diskette drives. But as I said that we will ever see the MB03 is questionable.
The MB02/03 is connected to the Spectrum in a similar way to the Plus D only the Mb02 is at least twice as long and twice as thick as the Plus D.
I know about the problem with the sound output of the 128K/+2. The beeper is a lot louder than at least a single AY channel. It's certainly possible to build a solution to this problem (a volume control etc.) but this certainly not the job of a diskette interface. I would personally recommend the modification to ACB-Stereosound. With this you have a separate socket just for the AY and in very good quality. We did describe this modification some years ago in SUC-Session or you can find the information on the internet at http://www.breezer.demon.co.uk/spec/tech/acbstereo.html.

SUC-FORUM((http://www.netreal.de/cgi-bin/forenserver/foren/F_554/cutecast.pl**)**
Here are a couple of interesting questions from the Internet Forum.

Norbert asks: I have expanded my MB02 from 128K to 512K but when I boot the diskette still shows only 128K and my RAMDISK has also not changed. What do I have to do?
Thomas answers: Hello Norbert, you must first of all execute the RAMDRIVE-CONFIGURATOR. You can download a copy from** http://www.8bc.com/sinclair. **This will automatically detect the available RAM and stores a new file called RAMDRIVE. It's important that you have deleted the old file 'Ramdrive'. As the boot-sequence always chooses the first file that it finds. Now boot your system again and format your S-RAM (Drive 9) with the FF17 format program.
Here are the parameters:
DRV = 9, HDD = 0, TRK = 15, SEC = 15
This gives the maximum capacity of approx. 450K. The rest is used by the system.

Mirko asks: Hi SUC-Members and Speccy-Friends!

I'm looking for someone to do some archiving.
This call for help goes out to all SUC-Members. Who can create a PC file which contains the list of all Programs, Demo's, Games and other items which have appeared in SCENE+? From the beginning up to the latest issue. If possible it shouldn't just be a simple text file. It should be possible to do searches and be able to produce lists by Issue or Name.

This file will then be made available on the internet, so it shouldn't (mustn't!) be a Microsoft-Word '.doc' file or similar which would make all of the personal data of the creators computer visible. Make some suggestions as to what could be done, and then a good archivist (and we have a couple of those in the club – I'm sure!!) could get down to work.

LCD Answers: A simple .txt file doesn't allow anyone to read the computer users personal data, which is not true of a .doc. I wonder how it looks with Microsoft works (.wks) or Excel. But if all else fails you could write your own program. The first 40-45 issues are already archived as a so called 'Scenex' so the task is not too difficult. The following 'sorts' should be possible: Title, Issue or Program type. Whether the CG's (Galleries) should be archived , I'm not sure, though personally I'm against it or it will never be finished in our lifetime.

News in brief

KGB
Phoenix has written a TR-.DOS emulation for the +D. It can read both TRD and SCL diskettes. The program disappeared a couple of years ago into a drawer but just by accident we got to know the programmer and he promised to produce an improved version. A version for the MB02 is also planned. He has also promised that we will be the first to receive it when it is finished.
Source: Phoenix

AY-Riders Internationally Famous
A track from the AY-Riders played on a Spectrum has been published as part of a CD collection and it has sold no less than 9000 copies. It is a CD-Collection called 'I'm loving it' and the songwriter is Factor6. Also in the collection is for example a song from Justin Timberlake (NSYNC) so the song is in good company.
Source: Yerzmyeye

Best View 2.17
Best View is a TR-DOS program which not only allows you to view the contents of diskettes but also offers the possibility of displaying text and graphic files, or to hear music files. The program has now reached version 2.17 and is available to the public and can be downloaded at http://ivr.webzone.ru/prog/bv_2_17.zip
Source: Yerzmyeye

ZLINCON
Suprisingly the Zlincon took place on the 18th and 19th of October in Zlin/Czech Republic. Obviously a lot of people were surprised because only 15 users turned up for the meet which is not many by east European standards, here in Germany we would see this number as 'not bad'. There was a presentation of the DivIDE controller and ZILOG was selling a CompactFlash adapter to use with it. PokeStudio had a lot of success with their presentation of the SID-Player on the Speccy. This was demonstrated using Atari-ST sound files and a small demo was also developed. We are trying to get all of the programs and pictures.
Source: Factor6

Compact Media Card Interface
At the NORSAM show in England, QUAZAR put forward the idea of building and selling a Compact Media Card to use as a Hard-disk for the SAM and showed a completed interface. Will this also be produced for the Spectrum?
Source: Kevin Benett

Mini Game Compo 2003
The competition to find the best 'mini game' has finished. The winner was the program 'Minima reloaded' on the C64. The best Spectrum entry was the full version of the program 'Amusment Park 4000' from Jonathan Cauldwell. It's really impressive to see what can be packed into just 4K. All of the results can be seen on http://starbase.globalpc.net/minigame/index.results.html
Source: Yerzmyeye

News in brief

New 'Real Spectrum'
There are two new files in the download area of Ramsoft's homepage http://www.ramsoft.bbk.org/realspec.html. They are emulator files which are still under development. This means it's not guaranteed that they will be stable when run. But anyone who wants to try them out can find them under 'Latest Development Builds'
Source: Icabod

Abe's Mission
It's not long since we reported that the game 'Abe's Mission' was only available in Russian and for TR-DOS. Now there is an English TAP version and Mirko will certainly try to fill SCENE+ with it in the near future.
Source: Yerzmyeye & Icoabod

Rough Justice
A further software title 'Rough Justice' has appeared by Cronosoft. In the game by the hyper active Jonathan Cauldwell you try to steer a space ship through a dangerous labyrinth. We are trying to get a test version so that we can report on it in more detail.
Source: Kevin Bennett

Spectrology in Wittenberg

Unfortunately none of our readers has sent us an article about the meeting in Wittenberg. Because of illness I couldn't attend personally but anyway here is a short overview of the meet based on an article from the Spectrum-Profi club magazine:

For the 5th time Norbert Opitz invited us to the Spectrology meeting in Wittenberg and it is not without reason that we look on this meeting as the biggest winner under the Spectrum meets in Germany. Again this year there were about 20 visitors present with their Speccy's to be shown off to one and all.
It was obvious that the SUC members tended more towards the MB02 than towards the diskette interfaces while the SPC members seemed to favour the +D more. This is not surprising as the SUC-Session followed the development of the MB02 in quite a lot of detail so that it's members had a much better idea of the MB02's capabilities. That the SUC-Session reported so much on the MB02 also isn't surprising as it was being sold by Sintech and so I had lot's of information available directly from the producer.

So you could see the MB02(with hard-disk), Spectrum 48K(with Compact Flash card) and lot's of other developments and modifications. Wolfang Hallers SAM completed the picture, not forgetting of course the laptop with Spectrum emulator.

Naturally there was some lively technical discussion and general chat about our common hobby and as usual the Saturday evening developed into a cultural occasion (varieties of beer) leading to a Sunday where the slight pounding in the head did not diminish the fun of once again being amazed at what our Speccy's can achieve.

From my own experience I know that it's always worth making the trip to Wittenberg.
te

Pictures from the Spectrology in Wittenberg

The Computer world today

Comment: The views expressed in this article are those of the author. They have been created from the observations and knowledge of the author. They aren't based on scientific fact and are open to discussion.

Well, what of the computer world today. What has changed since the Spectrum first appeared on the scene over 20 years ago. Today when you speak of the Spectrum almost no-one knows what you are talking about. At least not in Germany, even the C64 is recognised less and less often. And the world is today far removed from the very first computers which appeared even before these on the market. Just because someone is in their mid 30's today and knows his way around a PC doesn't mean that in his youth he had one of these early computers. Often hobby enthusiasts simply have a good eye for the right card or have developed their windows knowledge through their own experiences.

The good old 8 bitters can be a basis but don't have to be for everyone who works with a computer today. But what does the term 8 bitter really mean. This brings us to an actual current topic. Lot's of people speak about their 32 bit processors but no-one knows what it means. The Spectrum can be used as an example to explain this simply.

The Spectrum memory contains a selection of memory addresses. When you read out an address with PEEK. For example PEEK 32768 then you get a number. Most often a 0, however when there is a program in the memory then it can very well be a different value, for example 199. In reality there is no number 199 in the memory cell but rather a binary code. Binary means the code consists of zero's and one's. In the case of an 8 bit computer there are 8 of the binary digits. Rather than 199 the memory location contains 11000111. The Spectrum gives each of these digits a value as follows:

128	64	32	16	8	4	2	1	Value of each digit
1	1	0	0	0	1	1	1	Set=1 not set=0

Combining the positions which are set, the so called 'bits' we can calculate the complete value. This makes life simpler for people not for the computer. I think many people would have left computer programming alone if they had to work with binary code, because it's quicker to type in 199 than the binary combination of zero's and one's. In this example 128+64+4+2+1 = 199.

So the Spectrum can have a value of up to 255 in one memory location, which would occur when all of the bits were set. In reality the Spectrum can represent 256 different combinations (including zero) and read or write them in one operation.
That said, those who have some knowledge of memories and processors will be wondering: Who cares about the memory it's the processor performance which is important. That is correct, the processor is of course an 8 bit processor. In order to work on the numbers the Z80 (the processor used in the Spectrum) uses things called registers. These also have 8 digits and so are 8 bit registers. This is all very logical, memory and processor have to match. However the Z80 can use register pairs, for example it connects two registers together. So that it is in reality a 16 bit register. Despite this we normally talk of it as an 8 bit processor even though it almost has 16 bits.
And with that back to the computers of today where it's easy to see why the 32 bit CPU (Central processing unit) is more powerful than the 8 bit version. Whereas the 8 bit memory only has 8 digits the 32 bit memory can have 32 digits and so can move and work on larger numbers much more quickly. That some other factors such as clock speed are important is of course clear. Time is not standing still and the processors of today and also becoming faster and faster. But now everyone should understand that 32 bits is faster.

Everyone? No, a small firm in the USA still hasn't realised this. This company started many years ago in a garage and worked on what was to become BASIC for the C-64 (which mildly expressed is probably the worst BASIC of all time) and later changed to developing the diskette operating system for IBM PC's. Later they created a graphical interface for it, though in reality they just looked at what ATARI had done with the ST. They called it Windows and the company is really not that small as it's the largest in the world. We are of course talking about Microsoft.

Windows was developed for 16 bit processors. That was up to date about 10 years ago. In the mean time the processors have moved on and are in general now 32 bit devices and every year we get a new version of Windows. But nothing was changed it maintained it's 16 bit architecture. At least with the Home-Version of the new Windows XP we still have a 16 bit operating system. You can visualise it as if we have a 32 bit memory cell but only use the first 16 bits. What should be done when the computer is too slow? Easy, buy a new one. Super, of course Microsoft has only our best interests at heart and wants to remain compatible with older Windows versions, but truthfully: with an average life of a new system being 4 to 5 years who still needs compatibility with a 10 year old computer with it's ancient operating system.

Still, everyone one has a free choice you can use Linux. It's not so easy to get the software which you might want, not to mention compatibility with other systems which is worse than with Windows systems but never the less you do have a real 32 bit system. Or you buy one of the expensive Windows products such as Windows 2000 or the professional edition of Windows XP. Then you will also have the full 32 bits and after installing a number of service packs, astounding, almost no problems with the old 16 bit software.

Now we have used a new expression 'operating system'. What is it really? Well we only need to look at it's name. A system that is necessary in order to do any real work. In earlier days MS-DOS was a diskette operating system, it was needed in order to access information on a diskette. A similar system is also known on the Spectrum. For example, GDOS an operating system for the Disciple and +D as well as the well known MB-DOS of the MB02. However the Spectrum has in principle it's own built in operating system contained in the ROM. There you will find the instructions to tell the Spectrum to display a switch on message when power is applied and to check the keyboard regularly and if a key is pressed to display the appropriate character on the display. Of course it contains far more than this, this is just an example. A diskette operating system expands this functionality to include the things necessary to work with a diskette. And so it is with the PC. Even without Windows a PC is a PC. Only relatively useless, it can't do anything because it doesn't have a built in operating system. So the user can't communicate with the computer and when you don't tell a computer what it has to do it does nothing. This may remind some women of a man in the house and they may think that he could do with an operating system so that when they say something to him he would do it. On the subject of drivers well I don't want to forget what they can do at this time, yes believe me they do exist.

The PC does have a minimal operating system built in it's what is called the BIOS. This is what guarantees that even without Windows, when you switch on the computer something appears on the monitor and the PC automatically searches the Diskette, CD or Hard-disk for an operating system. Of course this file has to always have the same name or it won't work. As far as I know this is the AUTOEXEC (*Actually the PC uses quite a flexible loader system utilising the first sectors with the first head of the first cylinder of the Hard-disk and so isn't restricted in the name or position of the operating system on the disk – ian)*, but this could have changed and isn't important at this point. As the PC doesn't have it's complete operating system 'built in', it's possible to change it. So it's possible for example to change from Windows 98 to Windows 2000 and you only have to load the new operating system. But be careful the new operating system may work but it may call for new drivers and some older software may not be compatible with the new system.
The operating system in the Spectrum can also be changed. Some users have swopped their EPROMS. Instead of having it's operating system on a Hard-disk the Spectrum has it in a memory chip and even this can be altered. But not so easily as you need an EPROM-Programmer. The MB02 uses a different method it switches off the standard Spectrum EPROM and switches on it's own system which is held in SRAM memory. This is a normal type of memory which can be easily altered. So that you don't have to boot the system every time it has a battery to provide the SRAM with permanent power and so long as the battery is good the operating system will remain in the memory chips . So clever programmers can also change things in the Spectrums operating system. If something goes wrong then you simply need to take the boot diskette and everything will run again. However by comparison, with the PC it's better to leave system files well alone or afterwards nothing may work at all.
By the way: the people who create operating systems are much more likely to be users who have used a computer since early childhood than typical computer users. Anyone who knows a system programmer who is older than 30 can be reasonably certain that they have worked their way through the whole palette of 8 and 16 bit computers. In earlier days they were often selected from special programming groups such as Demo and Cracker groups.

Amongst the readers of this magazine there are a number who are at least active as programmers. It shows that they probably started early with computers as you rarely become a programmer by chance it's often necessary at a young age to choose this difficult career/study path.

Other things which are today programmed on PC's don't have so much to do with operating system programming. On the Spectrum we know of the high level language BASIC and machine code for the lowest level of machine programming. Though in reality this isn't really true as programming is almost never done with one's and zero's which is really machine code but rather they use an Assembler which is a language near to the architecture of the processor but is not exactly the same. BASIC is a high level language because it is located well above machine code. This doesn't mean that it is more important but rather that it is further from what the machine understands and nearer to what people understand. In BASIC many things are well known from English, for example the PRINT command or CLEAR which are really just English words. It's easy to understand that CLEAR, well clears something. In fact it clears the information from the screen. However there are other high level languages for the Spectrum such as 'C' and 'PASCAL' but they have never become very popular, but all of these languages have one thing in common, they are compiled, that is converted into a form of machine code. Only BASIC doesn't need to do this as there is a translation/interpreter program already in the ROM. If you write a program on the Spectrum in 'C' then it has to be translated before it can be run as machine code. But as the programming has taken place in a high level language then the system is not so near to the hardware this means that some of the steps will not be as well optimised for the processor as they would have been if written directly in machine code. The PC has the same problem: here some people have developed a high level language based on a previous high level language so that you are further and further away from the language the hardware understand directly. On the PC it's sometimes necessary as a PC is configured and programmed so that the program will run on many different machines and if it is programmed too near to the functionality of the PC then the program may not run on another model. However it makes the program more complex and slower to execute. The solution on the PC..... See Windows Operating system: buy a faster computer.

OK, so that's the way it is and we can't stop progress but we have to hope that the generation who could program from machine code up is not going to die out or we will have to develop new languages on top of existing languages and at the basic level of machine code, faults can no longer be identified or corrected. An effect of this was the fear of the 'great crash' as computers changed from 1999 to the year 2000. For a long time people had not programmed something completely new but had built on what they already had though none of us will ever know what happens when we pass from the year 9999 to the year 10000.

What we need to keep is a bit of individuality which the Spectrum gives us. We can get to know it right down to it's lowest levels. We can work right down at the machine code/ hardware level and are not restricted to just high level languages which may in the future create programs from the spoken word. So maybe for this reason Spectrum-users and other 8 bit fans are very special people who maintain even today their bit of individuality.

RETRO is coming, the old computers are once again 'IN'. You will see Atari-T-Shirts more often than you expect. It's time to start programming again.

Have fun doing it.

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Spectrum-Profi-Club Meeting

Following Wolfgangs invitation and after I had to miss the meet in Wittenberg because of illness, I just had to at least attend this meeting in Ittenbach near Cologne.
So wasting no time I arranged to meet Mirko and in an very fast time of only 3 hours we had completed the trip from Stuttgart to Ittenbach. Then in Ittenbach the fun began as one of the streets was closed because of road works. But it wasn't a big problem and we were soon standing in front of the hotel 'Im-Hagen' and we bravely entered.

The meeting had really been organised for the Joyce AG and so I was afraid the Spectrum would be under represented. But I couldn't have been more wrong. If I counted correctly there were 12 Spectrum and 13 Joyce users present. So certainly there was no dominance from just one system. The Spectrum users showed considerable interest in the Joyce machines and the Joyce users in the Spectrum. However the focus of the two groups is quite different, whereas on the Spectrum it's the colour and sound which are important. These are almost unknown features on the Joyce which concentrates on 'serious' applications. We certainly couldn't use the word serious as Mirko unpacked his 120 Watt booster loudspeakers and blasted the sound of his latest demo through the hall. But certainly the different orientations complemented each other very well. Especially as for a large part of the time the Joyce users were in a separate room holding their club AGM. After all they are an official club which must by necessity vote on various items concerning the club. This problem doesn't occur by the patriarchal leadership of the SPC and SUC which never the less still seem to function effectively, especially when it comes to communication at the club meets. Everything was there from the Compact-Flash card, the handy with Spectrum emulation on through to the SAM. Mirko looked for new ideas for SCENE+ and when the day was over and it was time to return home, I was just amazed.

A great day in Ittenbach, which could have had more visitors from the Cologne area as almost all of the Spectrum visitors had travelled quite long distances.

Still the Cologne members can do better next year, now at least they know how good it is.

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Tips & Tricks

Hello Adventurers!

Today we have chosen a real classic among the adventure programs. In fact it's the three part adventure 'Magnetic Moon' from the quill of Larry Horsfield. Once again with this program the player is fighting his way through outer space at a time when there seem to be more than enough problems to solve. This of course produces a cribble in the fingers of any adventurer.
Magnetic Moon is on one part of a trilogy which also includes the programs 'Starship Quest' and 'Revenge of the Space Pirates'. But perhaps more about these later. Let's concentrate on our project for today – Magnetic Moon. As already mentioned our adventure takes place in a time when space travel has become a common place activity. We are also often in space ships but still have to get to grips with lot's of new directions. With that in mind a short preface to describe some of the terms and a description of what they mean. AF means more or less 'back', FO is the other direction that is forwards. SF means right and PO left. Sailors will certainly be pained by this as they have their own terms for all of these things.
In the map these can be compared to the regular coordinates S,N,E and W. But we don't think any of you will have problems with this. As already said the adventure is in three parts. Today we want to look at the first part – it has the subtitle 'Search for the source of Power'. This gives us a small clue as to what we are searching for. As the solution to this adventure is quite complex we've divided the instructions into three parts. So now the first part of this adventure trilogy. In the associated map here are the locations you will find:

01) In the main controll room of the Stellar Queen / Captain Morgan, Commander Pocks
02) In a wide brightly lit tubular gangway
03) At the forward end of' a long gangway
04) In the flitter bay / backpack
05:) Near the aft end of the gangway / headshield
06) At a bend at. the aft end of the gangway
07) Outside the engine room door / Phillips, guard
08) At a bend at the aft. end of the long gangway
09) By an open doorway on the inbord side of the gangway
10) In the equipment stores / sonic drill, vibro saw, flashlight, forcer, tripad, short rope, extension lead, theodolite, laser cutter, PH test meter
11) In the main hold / grapnel, space axe, shovel
12) In the forward end of a long straight gangway
13) By the sickbay
14) In a small but very well equipped sickbay / oxygen bottle
15) In the port lifeboat bay
16) Standing by the entrance hatch off the lifeboat
17) Inside the lifeboat
18) Standing by the pilot´s couch / compartment, bubble helmet
19) Standing by the airlock / button
20) In a small airlock / button
21) Standing on a narrow lip of metal on the outer hull
22) Standing on the surface of the moon
23) At the edge of the area illuminated by the ship´s floodlight
24) On the foot of the low hills
25) In a dark canyon that winds through low hills

26) The canyon bends south here and widens out
27) At another bend
28) Near a huge black mass blocking the canyon
29) Standing by the midships section by the wreck of a gigantic freighter
30) Near the nose of the huge freighter
31) Clinging to the rope just below the open part in the hull of the freighter
32) In the cabin of a crewmember
33) In a long gangway chocked with debris and dead bodies
34) As far aft as you can go safely along the gangway
35) At the starboard end of a metal catwalk
36) About halfway across the catwalk
37) On the deck of the hold
38) At the aft end of the hold / wreckage , girder
39) Climbing on the handrail standious of the catwalk A
40) Climbing on the handrail standious of the catwalk B
41) At the bottom of the top section of handrail standious
42) Near the top of the handrail
43) In a doorway above the hold of the freighter
44) In a twisted and buckled gangway
45) Halfway along the twisted gangway
46) In a store room / some wire
47) Next to the girder below loose deckhead plates
48) At the end of the badly buckled gangway
49) In the former communication room of the huge freighter
50) Clinging on the rope just below the observation port
51) On the west side of the wrecked freighter
52) At the foot of a 30 metre high cliff / niche
53) At the tag end of a long brightly lit tunnel

So those are the locations in the map for the first part of the adventure. As you will have notice most of the game takes place on an unknown moon and involves a crashed freighter but we'll look at that in more detail as the adventure progresses. So with no more ado let's get on with the solution of the first part. We start off in the control room on board our space ship 'The Stellar Queen'. And then it proceeds like this:

Wait (the captain leaves the bridge), wait (the commander also leaves), AF, ST, AF (we are in the flitter bay), search flitter (We find a rucksack), take backpack, wear backpack, AF, search tools (you find a headshield), take headshield, AF, listen (we hear talking), look PO, wait, look PO, wear headshield, PO (because we are wearing the shield we can't be seen), PO, PO, FO, ST (Storerooms) open cupboard, search cupboard, take flashlight, take forcer, search racks, take short rope, search shelves, take laser cutter, put all into rucksack (none of the other objects are needed for the adventure) PO, AF, ST, ST, FO, remove headshield, drop headshield, FO, PO (main storage room), take grapnel, put grapnel into backpack, take axe (it won't fit in the rucksack so we carry it in our hand – no-one need the shovel in this adventure), ST, FO, FO, PO, AF, ST (Sickbay), search sickbay (Here you find an oxygen cylinder) take oxygen bottle, PO, FO (a long corridor with a control panel), examine panel, press hand onto panel, say erlin into microphone (the door opens), PO (by the lifeboat at the rear), FO, U (inside the lifeboat), FO, examine coach, search compartment (we find a divers helmet), take helmet, AF, D, AF, PO (by the airlock), press button, enter airlock, examine helmet, attach oxygen bottle to helmet, wear helmet, press button, leave airlock (we are standing on a short extension at the rear of the space ship), press button (the door closes), jump (onto the moons surface), look around, W, W (we are at the base of a hill), W (it's dark here), take flashlight from the backpack, switch on flashlight (if we had done this earlier we would have been detected and killed), W, S, W, W (we are near the middle of the wrecked freighter which inhibits our progress), N (at the nose of the freighter), look, U, take grapnel from backpack, examine grapnel, take rope

from backpack, examine rope, tie ropes together, throw grapnel at hole (this may take several attempts), climb rope, climb into port, take grapnel (we will need it later), PO, AF, PO, PO (around halfway across the step, which breaks and we fall into the depths of the storeroom), look, U, AF, search wreckage (we see a girder), take laser from backpack, cut girder with laser, put laser into backpack, drop axe (so that we can carry the girder), take girder, FO, drop girder, AF, take axe, FO, jump, U (back to the step), throw grapnel, climb rope, U, U (we are at an entrance), drop axe (just for the moment), PO, AF, PO (Spare part store), search junk (we find a spool of wire), take wire, ST, FO, ST, examine doorway (here there is a bolt hole), tie wire to bolthole, throw wire into hold, D, D, climb rope, D, D, tie wire to girder, jump, U, climb rope, take grapnel, U, U, pull wire (we pull the girder out of the storeroom), untie wire, take girder, PO, AF, drop girder under plates, FO, ST, take axe, PO, AF, run AFT, run AFT (we must do this quickly otherwise the roof will collapse and bury us – when we were quick enough we are now at the safe end of the corridor), PO, examine port, look, D, take laser from backpack, cut glass with laser (this action weakens the glass, but we can't burn right through it), put laser into backpack, break glass with axe, drop axe (from now on we don't need it anymore), hook grapnel into port, climb out of port, climb D rope, flick rope (the hook frees itself and we catch it), put grapnel into backpack (we are no on the west side of the crashed freighter), follow tracks (we come to the edge of a cliff), examine cliff (we see a niche), examine niche (here we see a large metal knob), push knob, turn knob (an entrance appears), switch off flashlight, put flashlight into backpack, enter tunnel…we now save the adventure as the first part has now been solved.

We will cover the second part of this adventure in a future issue of the magazine. Until then have fun by playing and experimenting for yourself…….

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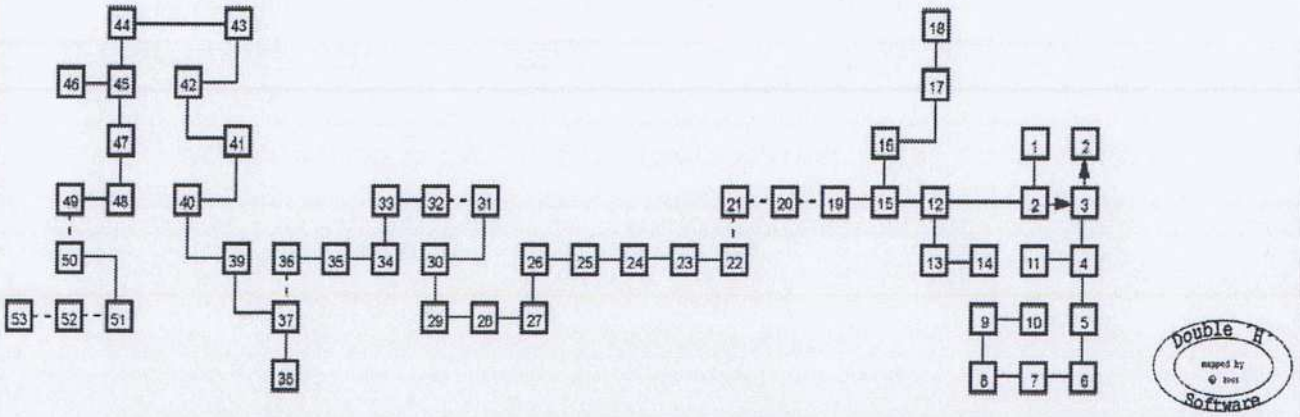
MAGNETIC MOON PART 1



Software-Test: 2 Cronosoft Title

Cronosoft is a new softwarehouse, which is bringing out new titles for computers such as the Spectrum. Any hobby programmers who want to publish their work can contact Cronosoft and receive a proportion of the sales revenue per item sold.

To do this there are some rules:

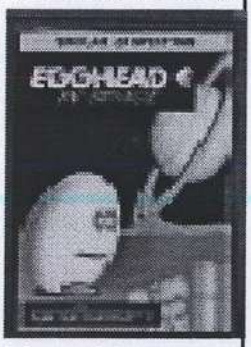
- The game should of course be new and the programmer must own the copyright
- It should be possible to offer the game at a low price

cronosoft

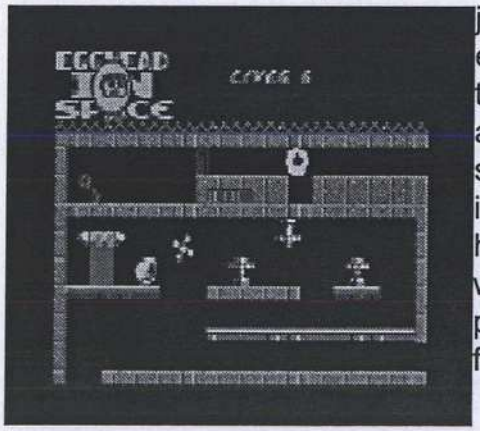
As Cronosoft has only existed since 2003 all of the programs mentioned here are from this year. Sales are only via the Internet and you can order at www.cronosoft.co.uk.

Program: Egghead in Space

A number of you will already know this program as it has been published in SCENE+. How, did Mirko infringe the copyright? Certainly not, the programmer himself gave us permission to publish a version. Even so there are good reasons to buy, as it is an expanded version of this Jump and Run game including more rooms and a loading screen. As well as this all Cronosoft games have a cassette insert and a nice booklet with instructions.



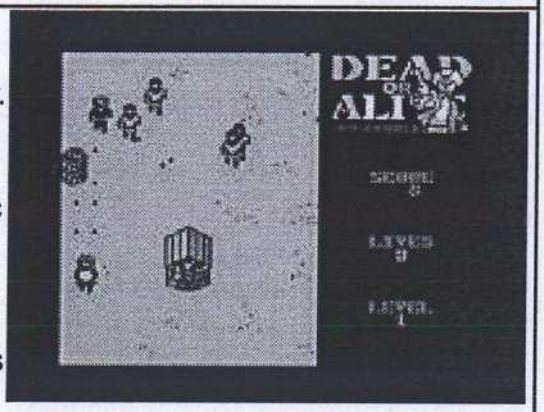
For all of those who don't subscribe to SCENE+ here is a short description: The program is a wonderfully animated Jump and Run game, just like the well known Jet Set Willy. It's especially worth mentioning in this game the humour aspect and the very good graphics with super animation. I've seldom seen a game figure which glides as smoothly over the screen as in this game. Of course you have to collect objects, which you use at another point in the game. Tricky, fun, great!



Program: Dead or Alive

This game is in principal a vertical scroller just like Egghead in Space from Jonathan Cauldwell. Perhaps, what is special here is that it all takes place in the wild west. As the new sheriff you have to keep the streets safe. This is not so easy as your opponents appear in large numbers and often from hiding. In the narrow streets it can get pretty hectic. It's not a good idea to shoot rapidly all over the place or you won't be able to identify the bullets of your opponents, which fortunately fly slowly, but never the less accurately in your

direction. In some of the barrels there are items which should make the life of the sheriff a little easier. For example boots which allow you to move faster or a gun which will shoot further. The game has everything you need to have fun. Perhaps the graphic is a little monochrome, on the other hand too much colour wouldn't be a good idea as you would be less able to see the bullets of your opponents. Though there would be nothing against more colourful houses on the sides of the road.



The sound is limited to a short AY-tune in the main menu and shooting sounds.
For those who like a 'shoot-em-up' certainly of interest.

Other titles from Cronosoft which are also available:
GLOOP
HOP'n Chop
ROUGH JUSTICE
And for the C-64 BALLOONACY

We will test these Spectrum titles in future issues of the magazine and hope that Cronosoft will continue to be successful.

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Event Calendar

28th - 30th November 2003 HCC day in Utrecht/Holland. The largest Dutch computer show with a Sinclair stand. Info: : http://www.hccdagen.nl

10th January 2004 the Spectrum & Sam meeting in Bunnik/Holland. Directions: http://www.hobby.nl/~sinclair-gg/duits/bunnik-map-dui.htm

5th – 7th March 2004 the ZX Team meeting in Dietges near Fulda

20th March 2004 the Spectrum & SAM meeting in Bunnik/Holland. Directions: http://www.hobby.nl/~sinclair-gg/duits/bunnik-map-dui.htm

22nd – 23rd May 2004 the international Sinclair and Sam meeting in Urmond/Holland

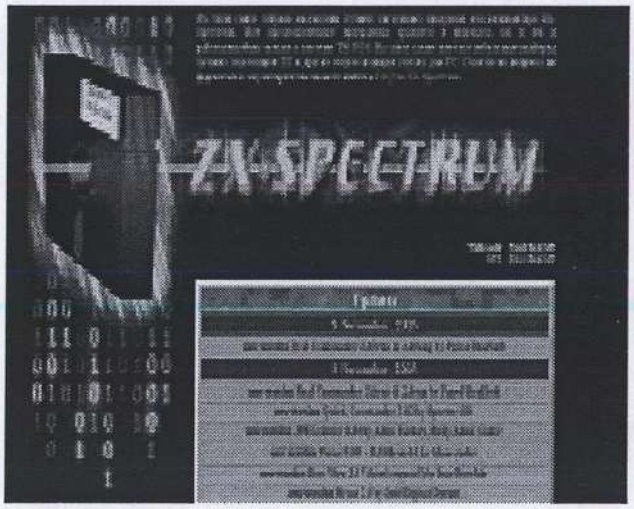
12th September 2004 the Spectrum & SAM meeting in Bunnik/Holland. Directions: http://www.hobby.nl/~sinclair-gg/duits/bunnik-map-dui.htm

2nd October 2004 A combined SPC meeting with the Joyce AG in Ittenbach near Königswinter.

Stars on the Internet

Once again we find ourselves on our journey through the internet looking for interesting sites. A tip brought us to 'Alans ZX Spectrum Pages'
http://freespace.virgin.net/aland.pearson/speccy/index.html
Alan Pearson has put together on this site a collection of Spectrum information. That's not anything very unusual. What's exceptional is his wonderful description of the DISCIPLE diskette interface. He describes the function each active component, this combined with the circuit diagram (also included on the site) makes it much easier to repair a faulty interface. In addition there is also a schematic of the Plus D PAL chip to download and lot's of other information concerning the Disciple and Plus D. For hobby constructors and technical fans definitely recommended.

Christof Odenthal gave us the tip to take another look at the pages of Realsoft:
http://zxsoft.fatal.ru/
I should say from the start that the site appears sometimes to be overloaded and not to function correctly. Never the less the address is correct. As you can see from the address it is a Russian site, but you need to keep a regular eye on what is happening on it. Here you will find everything the coder needs to make his heart beat faster. Firstly utilities for the Spectrum and the PC which are a great help in developing games or demo's. Emulators, Tracker, Graphic programs, assembler. Most of the Spectrum items are for TR-Dos and so for most of us they can only be used with an emulator (or has anyone in the club got a TR-Dos drive, or Beta-Disk?). That said it remains interesting to see just what is available and what is perhaps possible. Not just interesting for coders but for anyone looking for a particular application.



That's it for this time as I've run out of space. I look forward to hearing from you, send me any interesting internet addresses that you have discovered.
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Extraction from our pricelist:

New:	
Drive-Set with Floppy, PSU and cable for +3 B:drive or floppy-interface	40,00 Euro
VIDEO-Modulator (small kit for giving a Comp.Video signal on 48/48+ or +2A/+3	15,00 Euro
VGA-Box (leitet Video-Signal an PC-Monitor weiter)	49,00 Euro
IDE-Kit für MB02+ (ask for Harddisks and CD-Roms)	26,00 Euro
Spectrum +2A, new and in original box, complete	219,00 Euro
Didaktik Kompakt 48k	154,00 E KS
Diskinterface D80 + Flopppy for Didaktik or Spectrum	111,00 E KS
B-Drive for D80	60,00 E KS
Proface AT Extern (Keyboardi nterface to connect PC-Keyboard)	69,00 E KS
Proface AT intern	62,00 E KS
Melodik AY-Soundbox without case	21,00 E KS
Floppy drive (1860k for MB02, 720k for Opus, 780k f. +D) state type required	24,00 Euro
Power supply for +2A/B and +3 or for +2 (also 48k und 128k) state type	29,00 Euro
Floppy cable for 2 drives	4,00 Euro
Multiface 128 (also works on the 48k)	26,00 Euro
Multiface +3	46,00 Euro
Plus 3 cassette cable	9,90 Euro
+2/+3 Joystick Adapter	9,90 Euro
Spectrum +2 Lightpen	36,00 Euro
Spectrum +3 Lightpen	27,00 Euro
Silver paper for ZX Printer	5,00 Euro
Phaser-Pistole mit Software (Tape or +3)	19,00 Euro
Ersatzteile:	
+3 drive belt	2,00 Euro
Keyboard-Sticker for Spectrum / PC-Emulatoren	8,00 Euro
Keyboard membrane 48k	11,00 Euro
Keyboard membrane Spectrum +/128k, new Qualität, no aging, UV and heat resistent	21,00 Euro
4116 Memory IC	2,00 Euro
4464 Memory IC	3,00 Euro
Gebraucht:	
Sinclair ZX Spectrum 128k, complete with all cables	129,00 Euro
Sinclair ZX Spectrum +2, complete with all cables	79,00 Euro
Sinclair ZX Spectrum +2A, complete with all cables	69,00 Euro
Sinclair ZX Spectrum +3, built in 3" drive, complete with all cables	99,00 Euro
Sinclair Spectrum 48k komplett (Gummi), complete with all cables	64,00 Euro
Sinclair Spectrum 48k + komplett, complete with all cables	64,00 Euro
+3 Laufwerk (checked)	29,00 Euro
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Microdrive	25,00 Euro
Plus D Clone, without case,with 3,5" Floppy, cable + Power supply	129,00 Euro
Opus Discovery Diskinterface with 1 x 720k Drive	119,00 Euro
Joystickinterface 1-Port 3,00 • 2-Port	11,00 Euro
Joystick (various to choose froml)	2,50 Euro
Sinclair SJS-Joystick (+2/+3)	6,00 Euro
Microdrive Cartridges (ex-Software)	3,50 Euro
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GP32 – a park full of Games

Small and unknown. Only 'those in the know' are familiar with GP32 from the Korean firm 'Game Park'. That's not surprising as it's a very small firm which can never win the battle against the Gameboy giant Nintendo.

But firstly what is GP32: As you would guess from the comparison with the Gameboy it's one of those so called Handheld-Consoles. Which is just like the Spectrum small and handy. Designed as a game console the display is built directly into the device. The control buttons for left/right and up/down are also integrated into the left hand side of the device whereas other buttons such as 'Start' and 'Fire' are on the right.

OK, so it's a game console. What's that got to do with the Spectrum. Is there a Z80 inside? Afraid not. The CPU is a 32 bit Risc CPU (ARM9). This makes the Gamepark console one of the most powerful devices of this type. But now to what's special: The whole thing is an open source project. This means that although there are a number of commercial games available to buy the system is open for developers and programmers. The necessary tools are available on the internet and this idea has already established itself and spread to a fantastic degree. Not only do you get a windows like operating system but also lot's of games (all free), there are also fantastic emulators for an unbelievable number of computers.

Such as for example the Spectrum 48K incl. 48K beeper. The tone normally sounds pretty good but occasionally wrong. Also you can load most game (Z80) snapshots without any problem. The controls emulate the SINCLAIR 2 or in other words keys 6-0. In many games you can choose this option or select the keys you want to use. As the Gamepark doesn't have a keyboard you can display a Speccy-keyboard and use the cursor to select the keys you want to press. In this way you can for example press S=Start key for game begin etc. The graphics of the Spectrum are ideal for the Gamepark device which has an resolution of 320x240 pixels, allowing it to provide a good display of the Spectrum pixels and on the small but high quality colour screen the graphics look really good and while they are small they look even better than full size.

I've had the most fun with the game ACTION FORCE 2 as this game is easy to control though I had some problem in the third level where 'Daley Thompson ike' you have to oscillate the controls very rapidly to achieve the score you want. However the real Specci caused me the same sort of problems even with a proper joystick. So no negative points for the Gamepark.

No question, the Gamepark device istn't cheap and using it just to emulate Spectrum games is not using it to it's full potential. But it does have other possibilities (Especially the PC engine emulator which I liked a lot). It can also be used as an MP3 player. Anyone who want's to demonstrate what a Spectrum is, can simply whip out the Gamepark and run the emulator. The same applies to the C-64, MSX and lots of other systems. But never forget what I always say, you can't beat the real spectrum feeling. Especially in this case. The Spectrum isn't simply a games machine. That the Spectrum is so easy to understand makes it an especially interesting machine besides just the games. In this sense the emulator on a console can only partially emulate what a real Spectrum can achieve but

through it's versatility and because I'm an open-source fan I have no problem in recommending this device.

There will certainly be further development, at the moment it's still in it's infancy. It's only a question of time before we see a Spectrum 128 emulator which can run the latest demo's. I'm looking forward to it especially as the sound on the Gamepark is very good.

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Damit ist der Gamepark nicht nur die überlegene Taschenkonsole, durch die Open-Source Idee ist es auch vielen Hobby-Programmierern möglich, Programme zu gestalten, die im Internet herunterzuladen sind. Dabei handelt es sich nicht nur um Spiele: Durch die überlegene Technologie werden zunehmend Emulatoren geschaffen.
Zur Zeit kann der Gamepark folgende Systeme emulieren: Atari VCS, Atari 800, Atari Lynx, Atari ST, Colecovision, C-64, Dragon, Gameboy, Megadrive, MSX, Neo Geo, Nintendo NES, PC Engine, Sega Master, Sega Game Gear, Sinclair Spectrum, Super Nintendo, Vectrex, Wonderswan und viele Spielhallen-Geräte.

Preis: GP32 mit Hintergrundbeleuchtung 249,00 Euro

Zubehör: GP LINK Infrarot-Modul für Mehrspielerspaß. Keine Kabel, bis max. 10 m Ab

Preise: GP LINK 49,99 Euro
128MB Smart Media Card 44,99 Euro